

Importance Of Histopathology in the Treatment of Maxillofacial Lesions

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Abstract :Clinical Diagnosis can sometimes be misleading, particularly in bone lesions. Over-dependency on the past history, presenting features and clinical examination are not reliable tools in the treatment of maxillofacial lesions. We present here a case study where emphasis on previous history and treatment turned out to be misleading, till the final diagnosis was established after having obtained a histopathology and microbiology reports.[Havwala A et al NJIRM 2013; 4(6) : 139-142]

Key Words: Histopathology, Maxillofacial Lesions, Treatment

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Introduction: Cystic lesions of the mandible are commonly due to infection,(Periapical, Residual,Paradental Cysts) impacted teeth,(Dentigerous Cyst), remnants of epithelium -- The epithelial rests of Malassez and Serres-(**Odontogenic keratocyst**)⁴ Tuberculosis of the mandible is not a very common feature, particularly in elderly patients.

Case Report:A 65 year old male patient presented with complaint of swelling over his right jaw for last 10 days. The swelling had gradually increased in size, but pain was minimal. The teeth on the affected side were painful.

The patient had Past History of Squamous cell Carcinoma diagnosed by Histopathology and later operated and followed by Radiotherapy, at the Tata memorial Hospital, Mumbai ten years back. Hemimandibulectomy was done at that time, and the patient stayed symptom- free for all these years, till the present time.

On Examination, extra-orally, a well-defined swelling was visible, in the region of right mandibular first and second molars. Surface colour and texture was of normal skin, no veins or sinus openings, no discharge were visible on the surface on naked eye examination. On palpation, the swelling was soft, slightly tender, well-demarcated .

Intra-orally, there was a small, ovoid swelling visible in the buccal sulcus, next to right mandibular first and second molars, turgid, slightly tender on palpation.

There was no discharging sinus/s or fluid discharge.

O.P.G. X-Ray

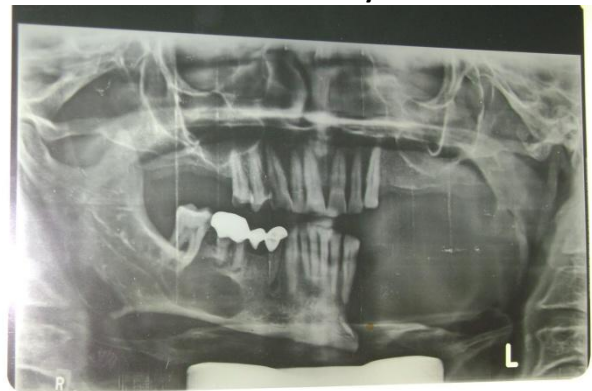


Fig. 1 -- Cystic lesion in the body of the Mandible.

OPG showed a well-demarcated ovoid radiolucency in the mandible, near the apices of second premolar and first and second molars on the right side. A Provisional Diagnosis of Periapical Cyst was arrived at. The patient was referred to a reputed Oral & Maxillofacial Surgeon for opinion and treatment. The Oral Surgeon opined that it was a case of squamous cell carcinoma recurrence on the right side. The patient was posted for the surgery.

Since the patient was diabetic, surgery was deferred till the blood glucose levels were normalized. Meanwhile, the patient decided to seek a second opinion and was advised surgical biopsy. Biopsy under intra-venous sedation was scheduled.

Intra-operative : When the bone was exposed, it was found to be extremely thin and a small window, 2 cms square, could easily be made. As

soon as the tissue was exposed, dirty white thick liquid welled up from the cavity immediately. A swab was taken and sent for culture.

Intraoperatively tuberculosis of the mandible was suspected, because of appearance of the bone & the dirty white caseous-like material which was seen in the bone.

The lesion in front of us was nothing like a carcinoma. It was just a cystic area and we could easily scoop out the soft tissue lining the cavity. This was sent for histopathology and the caseous fluid was sent for microbiology.

Results: 1. The swab culture report –Tuberculosis.
2. The biopsy report – Dentigerous Cyst.

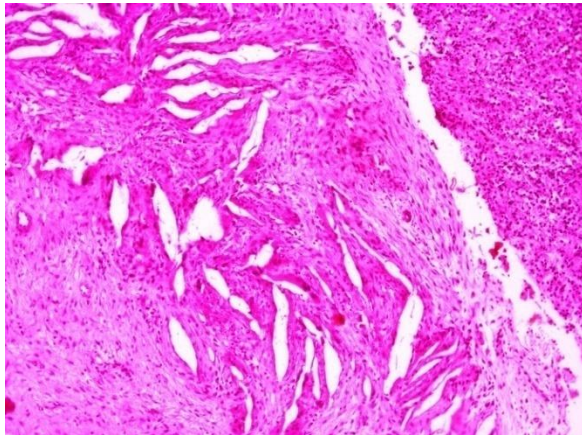


Fig. 2. Low Power view

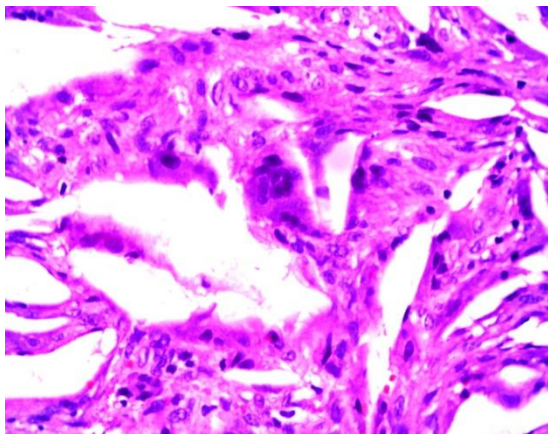


Fig. 3 High Power view

Histopathology Report --The Fragmented bits reveal a focally discernible cyst lining composed of stratified squamous epithelium. The surrounding

stroma contains dense lymphoplasmocytic inflammatory infiltrate admixed with neutrophils. Chronic inflammatory changes, evidenced by presence of cholesterol clefts are noted. There is no evidence of Malignancy.

Microbiology report - Swab culture showed a chronic inflammatory lesion suggestive of tuberculosis. On further questioning, the patient admitted to having been treated for tuberculosis fifteen years earlier.

Treatment : Since thorough scooping was done, we believe that the lesion was removed. Based on the Intra-operative diagnosis, swab culture and histopathology, patient was referred to the Physician for the treatment of Tuberculosis and he was put on anti-Koch's treatment. Patient received anti-tuberculosis multi-drug therapy for six months .

Clinically, there was much improvement. There was relief of pain in the teeth as well and post-treatment O.P.G. X-Ray showed signs of healing.



Fig. 4. Post-treatment O.P.G.X-Ray showing signs of healing and new bone formation.

Discussions with the Pathologist, the Physician, the Operating surgeon and the Radiologist, it was concluded that the lesion was a dentigerous cyst with superadded tubercular infection.

Discussion: If a patient has had a malignant lesion in the past, it should not be taken for granted that the subsequent lesion ,especially if it appears many

years later must be malignant only. One must keep in mind all the options & differential diagnosis.

Cystic and cystic-appearing lesions of the mandible are commonly noted on head and neck imaging and present a diagnostic dilemma for the radiologist.¹

By definition, a cyst is an epithelium-lined cavity that contains fluid or semisolid material. Pathologic analysis of the epithelial lining and contents and clinical and radiographic findings are generally required to achieve a definitive diagnosis.² Mandible is affected by a variety of pathological lesions, but its involvement by tuberculosis is extremely rare. Chatopel (1930) claimed that up to 1922 only 50 cases of this lesion were described. An additional 14 cases were reported from 1922 to 1939 (Meng 1940).⁷ Since then occasional cases have been recorded by Stuteville and Hulswit (1948), Pekarsky (1954), Spilka (1955), Allan (1956), Taylor and Booth (1964) and Weidmann and MacGregor (1969).⁹

The lesion has predominantly been reported in the ramus of the mandible, which on roentgenography showed multiple cystic areas.⁸

Oral lesions of tuberculosis though uncommon, are seen in both the primary and secondary stages of the disease. Primary oral tuberculosis may present as a diagnostic challenge for the clinician.

Secondary tuberculosis which occurs from a healed primary focus or due to endogenous spread of the infection is more common.⁹ When oral lesions of tuberculosis are the sole manifestations of the disease, the clinician may face a diagnostic challenge. Oral lesions of tuberculosis are non specific in their clinical presentation and are often overlooked by the clinician¹⁰

When the jaw bones are involved, the disease presents features of chronic osteomyelitis. When diagnosing such lesions with non healing tendency, tuberculosis should be considered in the differential diagnosis. In this assessment, a complete physical examination should also be included, with diagnostic tests such as chest radiographs, biopsy specimens for histological

studies and culture of the organism. An early diagnosis with prompt treatment will usually result in a complete cure.⁹

We strongly believe that when in doubt, an open biopsy is mandatory, before embarking on extensive excision & reconstruction, which is highly mutilating and can cause a patient lot of hardship, financial strain and functional disability.

Conclusion: In all cases of lesions of the Jaw, clinical findings are not always definitely conclusive. Coming to a conclusion regarding the diagnosis, based on a previous history and treatment of squamous cell carcinoma, cannot be decisive for future illness. Before undertaking extensive mutilating surgery, a proper histopathological diagnosis is mandatory.

Acknowledgements: We acknowledge the support given by the Histopathology department of the Breach Candy hospital, Mumbai especially Dr.Sarabjeet Kaur Arneja, for the detailed examination of the slide and exhaustive discussion of the lesion.

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Conflict of interest: None

Funding: None
